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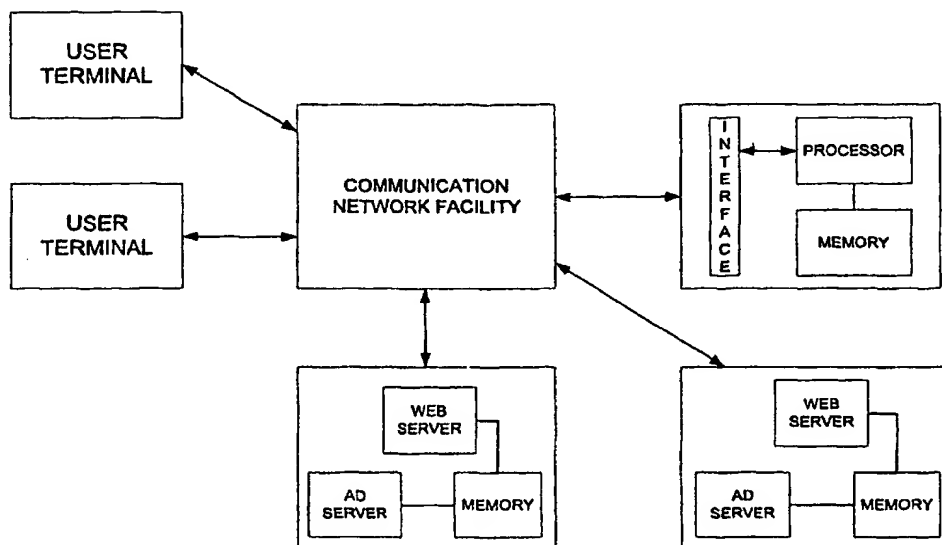
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(54) Title: METHOD AND SYSTEM FOR TRACKING USER SELECTIONS MADE OVER A BIDIRECTIONAL COMMUNICATION SYSTEM



(57) Abstract

A system and method for presenting information, for example, selected advertisements, to a user of a bidirectional communication system, such as the Internet or any other two-way network. In one illustrative embodiment, a user (16) selects certain advertisements relating to goods and/or services on a web site (18), and those selections are stored by the system. Subsequently, when the user (16) returns to the same site (18) or to the system's site (12), the selected advertisements, as well as possibly new advertisements related to the same goods and/or services, are available to the user (16) upon his or her request and the user may optionally proceed to the advertiser's site (18).

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METHOD AND SYSTEM FOR TRACKING USER SELECTIONS MADE OVER A
5 BIDIRECTIONAL COMMUNICATION SYSTEM

FIELD OF THE INVENTION

The present invention generally relates to the field of data communications over a bidirectional communication system. More specifically, the
10 invention is directed to a method and system for tracking selections made by users, for example, the selection of particular advertisements by users, and for creating a profile and/or identifying each user and presenting to each user selected and/or customized advertisements.

15 BACKGROUND OF THE INVENTION

Bidirectional communication systems, such as the Internet, bring people from all corners of the world together, providing for the exchange of ideas, information, and the like. The Internet is fast replacing other more conventional means of communication, such as the mail and telephone.

20 As is well known, the Internet is used by a number of content providers, which provide information, services, and the like, e.g., on their respective web sites. Many of these site operators sell advertising space on their sites to third party advertisers, which a user may click on to be directed to the advertiser's web site. Some of those content providers are publishers of newspapers, magazines, and the like, which
25 provide access to their publications electronically over the Internet. Other content providers include those entities engaged in electronic commerce.

Typically, both content and advertising are presented to a user at the same time. It is difficult for a user to pursue both content and advertising simultaneously. Thus, what is lacking is the ability to pursue one without losing or disregarding the
30 other.

Internet advertising is also temporal in that there is no provision for efficiently and/or intelligently storing particular advertisements selected by a user, or of interest to the user. If the user is in a hurry, he or she may elect not to read an advertisement he or she otherwise would want to read.

5 Accordingly, it will be apparent to those skilled in the art that there continues to be a need for a method and system for presenting particular advertisements and/or other information to certain users of a bidirectional communication system which uses a user profile and/or identification to handle those advertisements and/or information for that user. There is also a need for tracking and/or storing those
10 advertisements and/or information of interest to a particular user. The present invention addresses such needs.

SUMMARY OF THE INVENTION

 According to the present invention, a method and system are provided for
15 presenting information, for example, selected advertisements, to a user of a bidirectional communication system, such as the Internet or any other two-way network. In one illustrative embodiment, a user selects certain advertisements relating to goods and/or services on a web site, and those selections are stored by the system. Subsequently, when the user returns to the same site or to the system's site, the selected
20 advertisements, as well as possibly new advertisements related to the same goods and/or services, are available to the user upon his or her request.

 In one embodiment, the system provides for the registration of users and includes a number of different storage options from which a user may select when he or she registers with the system, such as automatically storing each selected advertisement,
25 querying the user upon each selection, and the like.

 In one illustrative embodiment, the present invention may be implemented using a computer network-based system associated with a web site which includes a processor operative to receive advertisement selections from a user and to store the selections in a database for future retrieval. When the user returns to the web site linked
30 to the system, and requests their stored information, the processor retrieves the user's

profile, optionally determines whether any new advertisements are available for advertisers listed in the user's profile, and presents any such new advertisements to the user, in addition to the stored information.

5 In another illustrative embodiment, the system maintains a number of databases for each user, each of which corresponds to a particular web site visited by the user. These databases may reside at the system, or alternatively may reside at the various web sites.

Thus, the system of the present invention in one illustrative embodiment includes a central computer system comprising an interface to communicate with remote
10 users and/or content providers over a communications network facility, and a processor programmed to receive advertisements for users and to create user profiles, and to present to each user, upon request, the stored information and, optionally, additional information, such as new advertisements, based upon each user's profile.

According to another illustrative embodiment of the invention, the system
15 creates an "ad-file" for each registered user, into which selected advertisements are stored for future retrieval and presentation to the user. In this manner, a user does not need to spend time reading an advertisement at the time it is presented to him or her at a web site, but may do so whenever it is convenient for the user.

In one embodiment, the system maintains an ad-file for each site visited
20 by a user, with the ad-files residing at either the system or, alternatively, at the various web sites themselves. In addition, the system preferably maintains one global ad-file for each user which stores all of the advertisements selected by that user at the various web sites.

An illustrative method according to the present invention includes the
25 steps of: presenting at least one advertisement to a user; creating a profile for the user if the user selects the advertisement; and, subsequently presenting the user with the advertisement and with additional information related to the original advertisement when the user returns to the system.

30 BRIEF DESCRIPTION OF THE DRAWINGS

Other objects, features and advantages of the invention discussed in the above summary of the invention will be more clearly understood when taken together with the following detailed description of the embodiments which will be understood as being illustrative only, and the accompanying drawings reflecting aspects of those

5 embodiments, in which:

FIG. 1 is a block diagram of a system for creating advertising profiles for users on a bidirectional communication system according to one illustrative embodiment of the present invention; and

FIG. 2 is a flow chart depicting the operational flow of the system of

10 FIG. 1.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawings, and particularly to FIG. 1, there is shown a system 10 for storing and subsequently presenting selected advertisements to a user of

15 a bidirectional communication system, such as the Internet or other two-way network, according to an illustrative embodiment of the present invention. Generally, the system includes a central tracking system 12 for receiving, storing, and presenting selected advertisements to users who access the system. The tracking system 12 creates and maintains a plurality of advertisement databases (i.e. "ad-files") for various users, with

20 the ad-files storing user-selected advertisements for future retrieval, as is described in greater detail below. The tracking system is connected to a communication network facility 14 which provides for communication via telephone lines, data lines, or a functionally equivalent link to a number of remote users, each located at a respective terminal 16, and to a number of remote sites 18, for example, web sites, operated by

25 various content providers, each of which includes a web server 21 programmed to present content to users over the network facility 14, as is conventional. The "terminals" referred to herein may be computers, telephones, facsimile machines, or any other suitable device which allows for bidirectional communication over a network, and includes an interface having well known hardware and software structure such as a

30 modem, tone decoder, networking interface, and the like, which is operative to initiate a

connection via the communication network facility 14 to the central tracking system 12 or to one of the web sites 18.

It will be apparent to those skilled in the art that the communication network facility 14 may be a telephone, facsimile, or data network system, a cellular telephone system, or any other suitable communication system. As is well known in the art, data may be transmitted over a conventional telephone network system, and data terminals can be attached to a cellular telephone for receiving and sending information. In addition, the communication network facility may include the Internet, a wide area network (WAN), a local area network (LAN), local computer terminals, or other suitable computer-based networks. Thus, it will be apparent that any communications network facility which allows for the bidirectional transmission of data is suitable for use with the central tracking system 12 of the present invention.

The central tracking system 12 in one illustrative embodiment includes a private system and preferably is located at the service provider's facility or similarly secure facilities. Alternatively, the system 12 may be part of a public network. For example, Internet service providers such as CompuServe®, America Online®, Earthlink®, and others provide access to various web sites to thereby make the data available to subscribers. Thus, it will be apparent that the system 10 of the present invention can either be implemented as a private network, or may be implemented in connection with a public network, for example, the Internet.

In one illustrative embodiment, the central tracking system 12 includes a number of communication ports C connected to the communication network facility 14 for simultaneous, two-way communication with one or more of the users 16 and/or web sites 18. The respective communication ports C are also connected to an interface 19 which is part of the central tracking system 12 and represents and incorporates well known hardware and software structures to allow for simultaneous communications with plural users and web sites. While only one tracking system 12 is shown, it will be apparent that there may be a plurality of such systems, each of which corresponds to one or more of the web sites or the like.

The central tracking system 12 further includes a processor 20 and

memory 22. The processor 20 is coupled to the interface 19 to communicate information with the remote users via the terminals 16 and with the remote web sites 18, as is described in greater detail below. The memory 22 is electrically connected to the processor, and receives and stores data from the processor, such as user profile
5 information regarding selected advertisements, the advertisements themselves, as well as user registration information supplied by the users upon registering with the system 12.

In one illustrative embodiment, the memory 22 is hierarchical and may include cache memory, RAM memory, disk subsystem memory, optical media, and/or tape and remote storage devices that can be accessed as needed.

10 The system 10 of the present invention creates and maintains a number of databases which serve to link various predetermined advertisements (e.g., "ad-file enabled advertisements") to the appropriate tracking system 12, so that a user who selects an advertisement is at least initially directed to the system 12, rather than being directed to the advertiser's web site, to provide the user with the option of creating
15 and/or modifying his or her ad-file, as is described in greater detail below. In one embodiment, a first database links each advertisement to a unique ad system URL which identifies the particular advertisement. In the case of ad-file enabled advertisements, each advertisement includes an embedded URL which links the advertisement to an ad server 30 which maintains the first database in memory 32. Thus, when a user clicks on
20 the advertisement, instead of being directed to the advertiser's web site (via the ad server), as is conventional, the user is instead routed to the ad server, which then accesses the first database to determine the URL of the appropriate ad-file (which is preferably stored at one of the tracking systems 12). The ad server and the first database are controlled by the web sites 18, and may reside anywhere, so long as the web sites
25 may access them when a user clicks on an ad-file enabled advertisement. Alternatively, the system may be designed such that the ad server is accessed regardless of whether the advertisement is ad-file enabled, with the ad server then accessing the association table in the database to determine an appropriate tracking system URL based on the particular advertisement that was selected, as is described in greater detail below.

30 The tracking system 12 which maintains the appropriate ad-file also stores

a number of databases, which may be in the form of association tables. One association table links the ad system URL with an advertisement identification number, which serves to uniquely identify the advertisement selected by the user at the web site 18. The association table also links the advertisement ID number to the actual advertisement

5 URL (i.e., the real URL associated with the advertisement). Alternatively, the advertisement URL may be provided by the ad server, as is described in greater detail below. It will be understood that each tracking system 12 may service a number of ad-file URLs, such that a plurality of different URLs direct the user to the same system 12, where the system can determine the appropriate advertiser URL by accessing the
10 association table in the database.

The tracking system 12 also maintains a user identifying database which, in one illustrative embodiment, relies on the receipt of "cookies" to determine the identity of the user. As is well known in the art, a cookie is a unique identifier sent by a content provider the first time content is sent to a particular computer that is typically
15 associated with a user. The cookie is stored on the user's machine, and is transmitted by the user's machine with each subsequent request to that particular content provider to identify the user. Thus, the user identifying database associates cookies with a unique user ID number, and with that user's profile. Alternatively, the system may simply ask the user to enter a user name and/or password for identification purposes.

20 Preferably, the system 12 also maintains a log file, which stores a user ID number, the advertisement identification number, a time stamp, and the action performed (e.g., whether the ad was saved in the user's ad-file or not).

The special features of the system of the present invention are implemented, in part, by software programs stored in memory 22 of the central tracking
25 system 12. The software programs are stored in one or more preselected data files and are accessible by the processor 20, the function of which is described in greater detail in connection with FIG. 2.

The system 10 may store the user-selected advertisement in many different ways. In one embodiment, the system 10 maintains a "global" ad-file for each
30 user, which is a data file that stores each advertisement selected by a user at the various

web sites. The global ad-file preferably resides at the tracking system 12.

Alternatively, the system may maintain a number of "local" ad-files for each user corresponding to the various web sites visited by the user. The local ad-files may reside at each web site, or alternatively at the tracking system 12, but preferably in a manner
5 transparent to the user.

Thus, in one illustrative embodiment of the invention, an advertiser may provide a conventional advertising banner (i.e., graphics) to the operator of the ad-file tracking system 12, along with an embedded URL of the advertiser. The operator of the tracking system 12 stores the banner and embedded URL, and provides an ad-file URL
10 to the advertiser, which the advertiser provides to the web site operator, along with the banner. The web site operator then links the ad-file URL with the advertisement in the association table in the database. Thus, when a user clicks on the banner, the user is not directed to the advertiser's web site, but instead is directed to the ad server associated with the web site operator. As described above, the ad server then accesses the database
15 to determine the appropriate ad-file URL for that advertisement, and directs the user to that URL, as is described in greater detail below.

Alternatively, the operator of a web site 18 may contract with the operator of the system 12, and provide the operator of the system 12 with one or more advertising banners previously received from various advertisers, along with the URL(s)
20 associated with the advertisement(s). The operator of the system 12 stores those banners and URLs, and then provides the web site 18 with various ad-file URLs to link to the corresponding advertisements.

It will be apparent that the invention can be implemented by web site content providers such as publishers and the like, by brand advertisers, either on their
25 own web sites or on content provider web sites, by entities engaged in electronic commerce, and the like.

Referring now to FIG. 2, the operation of the system 10 of the present invention is described in conjunction with the above structural description of the central tracking system 12 and the remote user terminals 16. As illustrated in FIG. 2, the
30 process begins when a user at one of the remote terminals 16 accesses a content

provider's web site 18 via the communication network facility 14. Once communication is established with the web site 18, operation begins at step 50, and the user receives information from the web server at the web site, which includes one or more advertisements, as is conventional. At step 52, the user clicks on one of the
5 advertisements, desiring to be directed to the advertiser's web site. At step 54, the ad server 30 maintained by the web site determines the appropriate ad system URL, with the ad system URL directing the user to the tracking system 12 and also including a unique ad identifier to identify the advertisement selected by the user.

Operation then flows to step 58, and the user is directed to the tracking
10 system 12 via the ad system URL. Also transmitted to the ad system URL is the real URL of the advertisement. At step 60, the system 12 determines whether a cookie is transmitted from the user's terminal. If so, this indicates that the user has already visited the tracking system 12, operation proceeds to step 62, and the system retrieves the user's profile. If, on the other hand, the user's terminal 16 does not transmit a
15 cookie, then operation flows to step 64 and the user is registered as either a first-time visitor or as an existing user using a different terminal.

Once the user's profile is retrieved or created, operation flows to step 66, and the system 12 determines, from the user's profile, whether the user's preference is to save every advertisement he or she selects. If the user preference is to save every ad,
20 the user's indication to save the ad and/or the advertisement graphics themselves are saved in the user's ad-file at step 68, along with the advertiser's URL, for future retrieval. As described above, the advertisement can be stored in a global ad-file, a local ad-file, or both. Alternatively, each advertisement may be saved in one central database at the system 12, with a user's ad-file simply storing a link to that
25 advertisement. In that manner, storage space is optimized. Optionally, the user is also notified that the advertisement (or a link to the advertisement) has been saved. The user may then be directed back to the original web site which presented the advertisement to the user. Alternatively, the user may be directed to the advertiser's web site after the advertisement has been saved by using the advertiser's URL transmitted by the ad server
30 30.

If, at step 66, the automatic saving of each advertisement is not the user's preference, operation instead proceeds to step 70, and the system 12 determines whether the user's preference is to be asked whether he or she wishes to go to the advertiser's web site. If the user's preference is to be asked whether he or she wishes to go to the advertiser's web site, operation flows to step 72, and the system 12 queries the user whether he or she wishes to be directed to the advertiser's web site. If the user wishes to be directed to the advertiser's web site, operation proceeds to step 74, and the system stores the advertisement (or the link to it) in the user's ad-file. Operation then proceeds to step 76, and the user is directed to the advertiser's web site.

If, at step 70, the user's preference is not the "always ask" option, operation proceeds instead to step 78, and the system 12 determines whether the user's preference is to always go to the advertiser's web site. If the user's preference is to always go to the advertiser's web site, operation proceeds to step 74 and the advertisement (or the link to it) is stored in the user's ad-file. Operation then proceeds to step 76 and the user is directed to the advertiser's web site.

If at step 78, it is determined that the user's preference is to not always go to the advertiser's web site, operation proceeds to step 80, and the user is redirected back to the publisher's site.

Thus, a user will create a file of stored advertisements or links to advertisements (the user's ad-file), which is maintained at the tracking system 12 in memory 22, to which the user may return at some later time. In addition, advertisers may have promotions or new advertisements, and will provide those promotions and/or new advertisements to the operator of the tracking system 12. Then, when the user accesses the system 12, the system retrieves the user's ad-file and presents the advertisements to the user. In addition, if any of the promotions or new advertisements relate to the same goods and/or services as those advertisements stored in the user's ad-file, the system may either present the promotions or new advertisement(s) to the user, or inform the user that promotions or new advertisements exist and ask the user whether he or she wishes to be presented with those promotions or advertisement(s). In this manner, users may be presented with only certain advertisements based upon the user's

profile.

Alternatively, an advertiser may generate a new advertisement which is intended to be a substitute for an old advertisement, or may provide additional information to supplement an old advertisement. Thus, the new advertisement (or
5 supplemental information) may be stored in the ad-files of the users who selected the old advertisement, with the old advertisement being removed from those ad-files in the case of a new advertisement. In addition, advertisers may have ad schedules, with certain advertisements being stored in the various ad-files depending on the time of year.

When an advertisement is retrieved by the tracking system 12, it may be
10 provided to the user in a number of ways. In one preferred embodiment, as is described above, the advertisement is transmitted to the user via the communication network facility 14. Alternatively, the advertisement may be transmitted as an electronic mail ("email") transmission, a facsimile transmission, or any other suitable transmission.

From the foregoing, it will be apparent that the system 10 of the present
15 invention provides a convenient, efficient system for storing and later presenting information, for example, selected advertisements, to a user of a bidirectional communication system. In addition, the system stores selected advertisements for a user which the user may access at some later time to read.

The system 12 may generate revenue for the system operator in the form
20 of any one or more of advertising fees, registration fees, and the like.

While forms of the invention have been described, it will be apparent to those skilled in the art that various modifications and improvements may be made without departing from the spirit and scope of the invention. As such, it is not intended that the invention be limited to the illustrative embodiments set forth herein.

25

WHAT IS CLAIMED IS:

1 1. A method for storing and selectively presenting selected information to a
2 user of a bidirectional communication system, comprising the steps of:
3 storing data relating to the information in a preselected file, in response to the
4 selection of the information by the user; and
5 subsequently presenting the data to the user in response to a user request.

1 2. The method of claim 1, further including the step of redirecting the user
2 to a central tracking system in response to the selection of particular information by the
3 user.

1 3. The method of claim 1, wherein the step of storing data comprises storing
2 the data in a global file at a central tracking system.

1 4. The method of claim 1, wherein the step of storing data comprises storing
2 the data in a selected local file for the user.

1 5. The method of claim 4, wherein the local file is maintained at a central
2 tracking system.

1 6. The method of claim 1, wherein the step of storing data comprises storing
2 at least one of graphical data, text data, audio, video and identification data.

1 7. The method of claim 2, wherein the step of storing data comprises storing
2 data corresponding to each piece of information selected by the user.

1 8. The method of claim 2, wherein the step of storing data comprises
2 querying the user whether to store data for each piece of information selected by the
3 user, and storing data corresponding to the pieces of information that the user designates

4 for storage.

1 9. The method of claim 1, wherein the step of presenting comprises
2 presenting the data along with additional data relating to the selected information.

1 10. The method of claim 1, wherein the information comprises at least one
2 advertisement, and further including the step of directing the user to a URL of the
3 selected advertisement after storing the data relating to the selected advertisement.

1 11. The method of claim 1, further including the steps of directing the user to
2 a central tracking system, and creating a profile for the user and registering the user if
3 the user is a new user.

1 12. The method of claim 1, further including the steps of directing the user to
2 a central tracking system, determining if the user is a registered user, retrieving the
3 user's profile if the user is a registered user, and presenting additional information based
4 on said profile.

1 13. The method of claim 1, wherein the step of storing comprises storing, in
2 addition to the data relating to the selected information, additional data in the preselected
3 file, and presenting the additional data to the user in response to the user request.

1 14. The method of claim 1, wherein the step of storing comprises storing, in
2 the preselected file, a link to a selected piece of information.

1 15. The method of claim 1, further including the step of creating a
2 corresponding file for each site visited by a user, and wherein the step of storing
3 comprises storing the data in the corresponding file.

1 16. The method of claim 1, further including the steps of maintaining a

2 database to link selected pieces of information to a central tracking system, and directing
3 a user to the central tracking system when the user selects one or more of the selected
4 pieces of information.

1 17. The method of claim 1, further including the steps of accessing a server
2 when a user selects a piece of information, and accessing, at the server, a database to
3 determine an appropriate destination based on the selected information, and routing the
4 user to the destination.

1 18. The method of claim 1, further including the steps of maintaining, at a
2 central tracking system, a database to link unique pieces of information with a URL for
3 the information.

1 19. The method of claim 1, further including the step of identifying the user
2 via a user identification database and information transmitted by the user's terminal.

1 20. The method of claim 1, wherein the information comprises
2 advertisements, and wherein the step of storing data comprises the steps of storing the
3 advertisement in a centralized database, and storing identifying data in a user file.

1 21. A system for storing and selectively presenting selected information to a
2 user of a bidirectional communication system, comprising:
3 a central computer system comprising an interface to communicate with remote
4 users and content providers over a communications network facility; and
5 a processor programmed to create at least one file for each user, and to be
6 responsive to selection by a user of a particular piece of information to store data
7 relating to the piece of information in the user's file, the processor being further
8 programmed to present to each user, upon request, the data stored in the user's file.

1 22. The system of claim 21 for use over a computer network, wherein the

2 interface is designed to communicate over the computer network.

1 23. The system of claim 21, wherein the processor is programmed to create a
2 global file for each user, and to store the data in the global file for the user.

1 24. The system of claim 21, wherein the processor is programmed to create a
2 plurality of local files for each user, and to store the data in the corresponding local file
3 for the user.

1 25. The system of claim 21, wherein the processor is programmed to store at
2 least one of graphical data, text data, video, audio and identification data.

1 26. The system of claim 21, wherein the processor is programmed to retrieve
2 a user's profile, and to store data in the user's file based on the user's profile.

1 27. The system of claim 21, wherein the processor is programmed to present
2 the stored data to the user, along with additional data relating to the selected
3 information.

1 28. The system of claim 21, wherein the processor is programmed to
2 determine if the user is a registered user, and retrieving the user's profile if the user is a
3 registered user.

1 29. The system of claim 21, wherein the processor is programmed to create a
2 corresponding file for each site visited by a user, and to store the data in the
3 corresponding file.

1 30. The system of claim 21, further including a server that maintains a
2 database to determine an appropriate destination for a user based on the selected
3 information, and programmed to route the user to the destination.

1 31. The system of claim 21, wherein the selected information comprises at
2 least one advertisement, and wherein the processor is responsive to selection by a user of
3 a particular advertisement to store data relating to the advertisement in the user's file.

1 32. The system of claim 31 wherein the processor is programmed to direct the
2 user to a URL of the selected advertisement.

FIG. 1

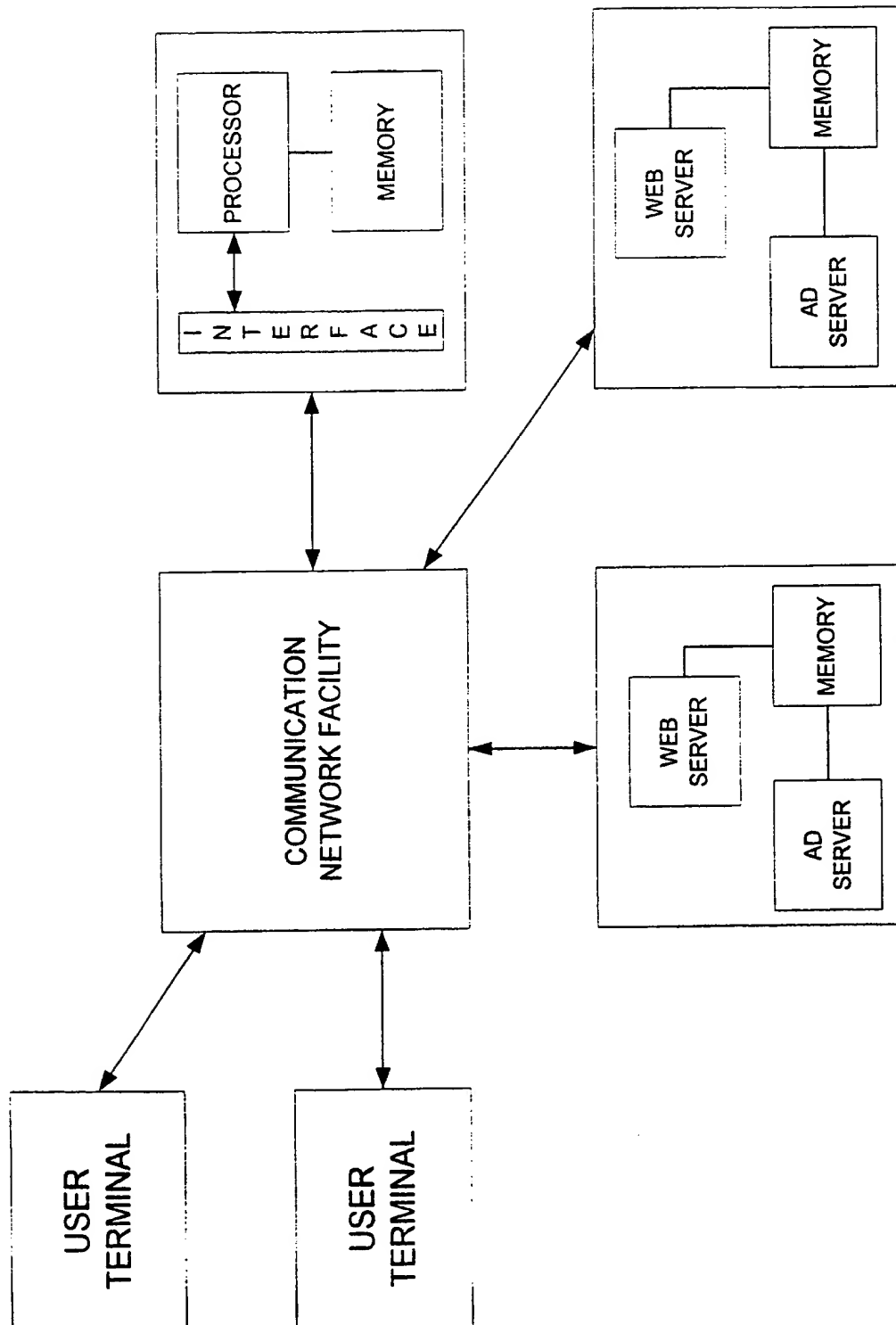
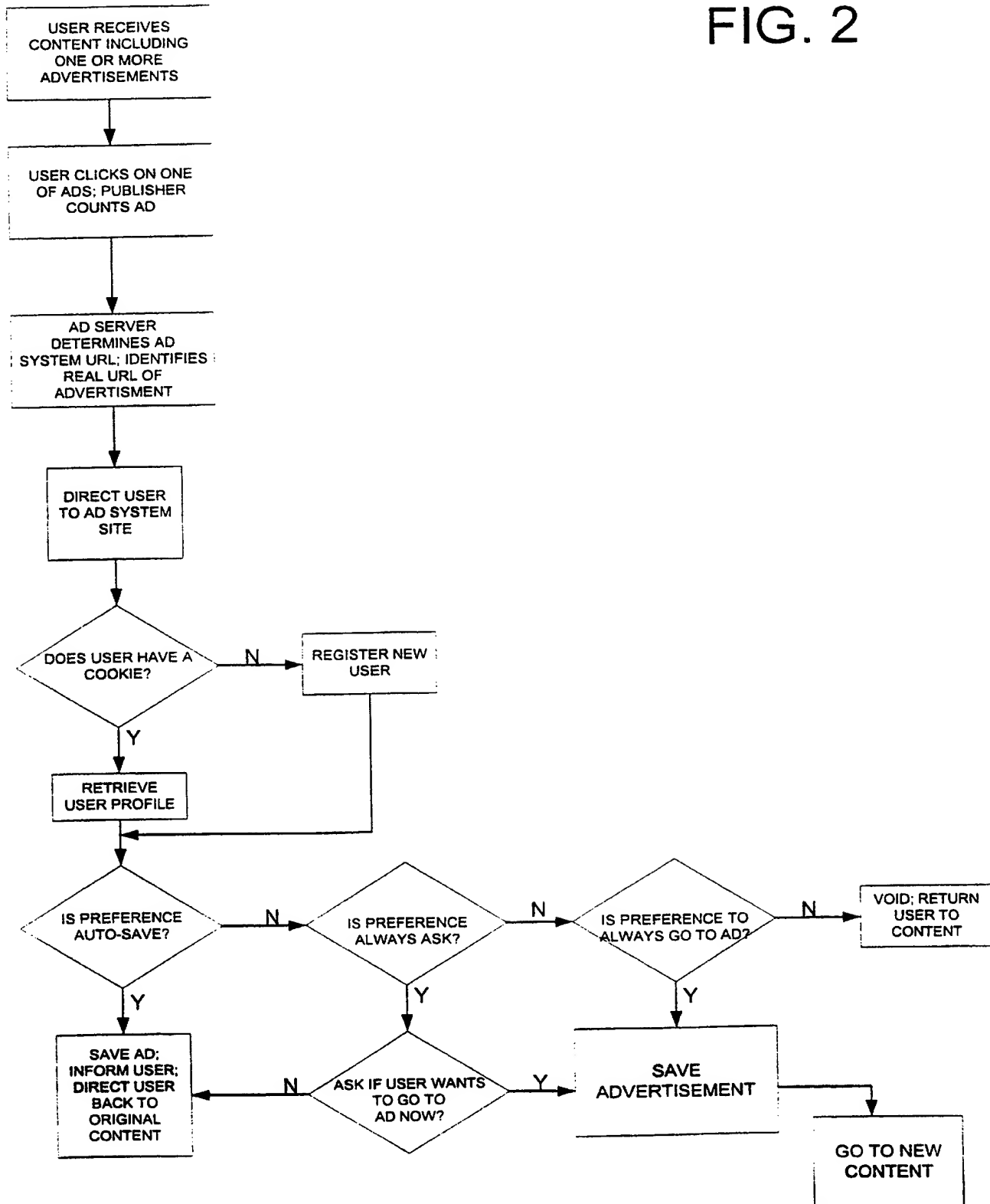


FIG. 2



INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/08281

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06F 17/60

US CL : 705/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 705/14, 28, 29

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

East Service (USPatfiles, JPO, EPO and Derwent files)(see attached) and DIALOG (financial and business databases)(see attached)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,855,007 A (JOVICIC et al) 29 December 1998, Fig. 3, Fig. 6, col. 2, lines 39-46, col. 7, lines 1-45, lines 56-64, col. 8, lines 1-23, col. 9, lines 38-65 and col. 10, lines 1-7.	1-9, 11, 12, 19, 21-29 and 31
X	US 5,848,396 A (GERACE) 08 December 1998, col. 4, lines 1-11, lines 21-47 col. 6, lines 13-22, lines 46-57, col. 9, lines 31-39, col. 10, lines 33-39, col. 13, lines 37-46, lines 61-67 and col. 14, lines 31-36.	10, 13-18, 20, and 30
A	US 5,809,242 A (SHAW et al) 15 September 1998, see abstract.	1-31
A, P	US 6,029,195 A (HERZ) 22 February 2000, see abstract.	1-31

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"A" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

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INTERNATIONAL SEARCH REPORT

International application No.
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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 409034902 A (SATO et al) 07 February 1997, see abstract.	1-31
A	US 5,287,181 A (HOLMAN) 15 February 1994, see abstract.	1-31
A	REICHARD, KEVIN. Cache as cache can. UNIX Review's performance Computing. September 1998. Vol. 16, No. 10. pages 55-57.	1-31
A	SULLIVAN, EAMONN. Lessening Internet speed penalties. (Intersights)(PC Week Netweek). PC Week. 24 June 1996. Vol. 13. No. 25. page N3.	1-31
A	GIOBBE, DOROTHY. California daily developing cable classified service: Orange County Register, in parthership with the Interactive Channel, hopes to roll out the American Classified Network in 1995. Editor & Publisher. 18 June 1994. Vol. 127. No. 25. page 26.	1-31

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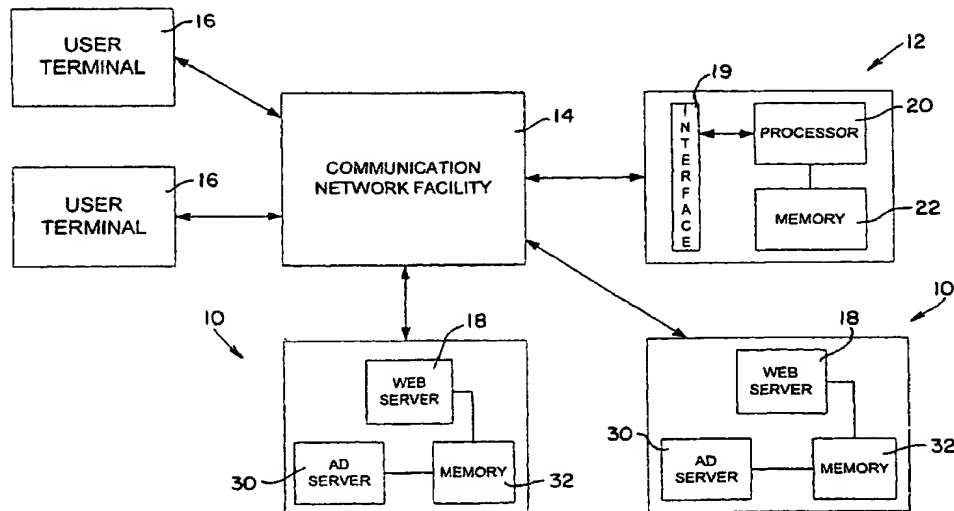
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[Continued on next page]

(54) Title: METHOD AND SYSTEM FOR TRACKING USER SELECTIONS MADE OVER A BIDIRECTIONAL COMMUNICATION SYSTEM



(57) Abstract: A system and method for presenting information, for example, selected advertisements, to a user of a bidirectional communication system, such as the Internet or any other two-way network. In one illustrative embodiment, a user (16) selects certain advertisements relating to goods and/or services on a web site (18), and those selections are stored by the system. Subsequently, when the user (16) returns to the same site (18) or to the system's site (12), the selected advertisements, as well as possibly new advertisements related to the same goods and/or services, are available to the user (16) upon his or her request and the user may optionally proceed to the advertiser's site (18).

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METHOD AND SYSTEM FOR TRACKING USER SELECTIONS MADE OVER A
5 BIDIRECTIONAL COMMUNICATION SYSTEM

FIELD OF THE INVENTION

The present invention generally relates to the field of data communications over a bidirectional communication system. More specifically, the invention is directed to a method and system for tracking selections made by users, for
10 example, the selection of particular advertisements by users, and for creating a profile and/or identifying each user and presenting to each user selected and/or customized advertisements.

15 BACKGROUND OF THE INVENTION

Bidirectional communication systems, such as the Internet, bring people from all corners of the world together, providing for the exchange of ideas, information, and the like. The Internet is fast replacing other more conventional means of communication, such as the mail and telephone.

20 As is well known, the Internet is used by a number of content providers, which provide information, services, and the like, e.g., on their respective web sites. Many of these site operators sell advertising space on their sites to third party advertisers, which a user may click on to be directed to the advertiser's web site. Some of those content providers are publishers of newspapers, magazines, and the like, which
25 provide access to their publications electronically over the Internet. Other content providers include those entities engaged in electronic commerce.

Typically, both content and advertising are presented to a user at the same time. It is difficult for a user to pursue both content and advertising simultaneously. Thus, what is lacking is the ability to pursue one without losing or disregarding the
30 other.

Internet advertising is also temporal in that there is no provision for efficiently and/or intelligently storing particular advertisements selected by a user, or of interest to the user. If the user is in a hurry, he or she may elect not to read an advertisement he or she otherwise would want to read.

5 Accordingly, it will be apparent to those skilled in the art that there continues to be a need for a method and system for presenting particular advertisements and/or other information to certain users of a bidirectional communication system which uses a user profile and/or identification to handle those advertisements and/or information for that user. There is also a need for tracking and/or storing those
10 advertisements and/or information of interest to a particular user. The present invention addresses such needs.

SUMMARY OF THE INVENTION

According to the present invention, a method and system are provided for
15 presenting information, for example, selected advertisements, to a user of a bidirectional communication system, such as the Internet or any other two-way network. In one illustrative embodiment, a user selects certain advertisements relating to goods and/or services on a web site, and those selections are stored by the system. Subsequently, when the user returns to the same site or to the system's site, the selected
20 advertisements, as well as possibly new advertisements related to the same goods and/or services, are available to the user upon his or her request.

In one embodiment, the system provides for the registration of users and includes a number of different storage options from which a user may select when he or she registers with the system, such as automatically storing each selected advertisement,
25 querying the user upon each selection, and the like.

In one illustrative embodiment, the present invention may be implemented using a computer network-based system associated with a web site which includes a processor operative to receive advertisement selections from a user and to store the selections in a database for future retrieval. When the user returns to the web site linked
30 to the system, and requests their stored information, the processor retrieves the user's

profile, optionally determines whether any new advertisements are available for advertisers listed in the user's profile, and presents any such new advertisements to the user, in addition to the stored information.

5 In another illustrative embodiment, the system maintains a number of databases for each user, each of which corresponds to a particular web site visited by the user. These databases may reside at the system, or alternatively may reside at the various web sites.

Thus, the system of the present invention in one illustrative embodiment includes a central computer system comprising an interface to communicate with remote
10 users and/or content providers over a communications network facility, and a processor programmed to receive advertisements for users and to create user profiles, and to present to each user, upon request, the stored information and, optionally, additional information, such as new advertisements, based upon each user's profile.

According to another illustrative embodiment of the invention, the system
15 creates an "ad-file" for each registered user, into which selected advertisements are stored for future retrieval and presentation to the user. In this manner, a user does not need to spend time reading an advertisement at the time it is presented to him or her at a web site, but may do so whenever it is convenient for the user.

In one embodiment, the system maintains an ad-file for each site visited
20 by a user, with the ad-files residing at either the system or, alternatively, at the various web sites themselves. In addition, the system preferably maintains one global ad-file for each user which stores all of the advertisements selected by that user at the various web sites.

An illustrative method according to the present invention includes the
25 steps of: presenting at least one advertisement to a user; creating a profile for the user if the user selects the advertisement; and, subsequently presenting the user with the advertisement and with additional information related to the original advertisement when the user returns to the system.

30 BRIEF DESCRIPTION OF THE DRAWINGS

Other objects, features and advantages of the invention discussed in the above summary of the invention will be more clearly understood when taken together with the following detailed description of the embodiments which will be understood as being illustrative only, and the accompanying drawings reflecting aspects of those

5 embodiments, in which:

FIG. 1 is a block diagram of a system for creating advertising profiles for users on a bidirectional communication system according to one illustrative embodiment of the present invention; and

FIG. 2 is a flow chart depicting the operational flow of the system of

10 FIG. 1.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawings, and particularly to FIG. 1, there is shown a system 10 for storing and subsequently presenting selected advertisements to a user of

15 a bidirectional communication system, such as the Internet or other two-way network, according to an illustrative embodiment of the present invention. Generally, the system includes a central tracking system 12 for receiving, storing, and presenting selected advertisements to users who access the system. The tracking system 12 creates and maintains a plurality of advertisement databases (i.e. "ad-files") for various users, with

20 the ad-files storing user-selected advertisements for future retrieval, as is described in greater detail below. The tracking system is connected to a communication network facility 14 which provides for communication via telephone lines, data lines, or a functionally equivalent link to a number of remote users, each located at a respective terminal 16, and to a number of remote sites 18, for example, web sites, operated by

25 various content providers, each of which includes a web server 21 programmed to present content to users over the network facility 14, as is conventional. The "terminals" referred to herein may be computers, telephones, facsimile machines, or any other suitable device which allows for bidirectional communication over a network, and includes an interface having well known hardware and software structure such as a

30 modem, tone decoder, networking interface, and the like, which is operative to initiate a

connection via the communication network facility 14 to the central tracking system 12 or to one of the web sites 18.

It will be apparent to those skilled in the art that the communication network facility 14 may be a telephone, facsimile, or data network system, a cellular telephone system, or any other suitable communication system. As is well known in the art, data may be transmitted over a conventional telephone network system, and data terminals can be attached to a cellular telephone for receiving and sending information. In addition, the communication network facility may include the Internet, a wide area network (WAN), a local area network (LAN), local computer terminals, or other suitable computer-based networks. Thus, it will be apparent that any communications network facility which allows for the bidirectional transmission of data is suitable for use with the central tracking system 12 of the present invention.

The central tracking system 12 in one illustrative embodiment includes a private system and preferably is located at the service provider's facility or similarly secure facilities. Alternatively, the system 12 may be part of a public network. For example, Internet service providers such as CompuServe®, America Online®, Earthlink®, and others provide access to various web sites to thereby make the data available to subscribers. Thus, it will be apparent that the system 10 of the present invention can either be implemented as a private network, or may be implemented in connection with a public network, for example, the Internet.

In one illustrative embodiment, the central tracking system 12 includes a number of communication ports C connected to the communication network facility 14 for simultaneous, two-way communication with one or more of the users 16 and/or web sites 18. The respective communication ports C are also connected to an interface 19 which is part of the central tracking system 12 and represents and incorporates well known hardware and software structures to allow for simultaneous communications with plural users and web sites. While only one tracking system 12 is shown, it will be apparent that there may be a plurality of such systems, each of which corresponds to one or more of the web sites or the like.

The central tracking system 12 further includes a processor 20 and

memory 22. The processor 20 is coupled to the interface 19 to communicate information with the remote users via the terminals 16 and with the remote web sites 18, as is described in greater detail below. The memory 22 is electrically connected to the processor, and receives and stores data from the processor, such as user profile
5 information regarding selected advertisements, the advertisements themselves, as well as user registration information supplied by the users upon registering with the system 12.

In one illustrative embodiment, the memory 22 is hierarchical and may include cache memory, RAM memory, disk subsystem memory, optical media, and/or tape and remote storage devices that can be accessed as needed.

10 The system 10 of the present invention creates and maintains a number of databases which serve to link various predetermined advertisements (e.g., "ad-file enabled advertisements") to the appropriate tracking system 12, so that a user who selects an advertisement is at least initially directed to the system 12, rather than being directed to the advertiser's web site, to provide the user with the option of creating
15 and/or modifying his or her ad-file, as is described in greater detail below. In one embodiment, a first database links each advertisement to a unique ad system URL which identifies the particular advertisement. In the case of ad-file enabled advertisements, each advertisement includes an embedded URL which links the advertisement to an ad server 30 which maintains the first database in memory 32. Thus, when a user clicks on
20 the advertisement, instead of being directed to the advertiser's web site (via the ad server), as is conventional, the user is instead routed to the ad server, which then accesses the first database to determine the URL of the appropriate ad-file (which is preferably stored at one of the tracking systems 12). The ad server and the first database are controlled by the web sites 18, and may reside anywhere, so long as the web sites
25 may access them when a user clicks on an ad-file enabled advertisement. Alternatively, the system may be designed such that the ad server is accessed regardless of whether the advertisement is ad-file enabled, with the ad server then accessing the association table in the database to determine an appropriate tracking system URL based on the particular advertisement that was selected, as is described in greater detail below.

30 The tracking system 12 which maintains the appropriate ad-file also stores

a number of databases, which may be in the form of association tables. One association table links the ad system URL with an advertisement identification number, which serves to uniquely identify the advertisement selected by the user at the web site 18. The association table also links the advertisement ID number to the actual advertisement

5 URL (i.e., the real URL associated with the advertisement). Alternatively, the advertisement URL may be provided by the ad server, as is described in greater detail below. It will be understood that each tracking system 12 may service a number of ad-file URLs, such that a plurality of different URLs direct the user to the same system 12, where the system can determine the appropriate advertiser URL by accessing the
10 association table in the database.

The tracking system 12 also maintains a user identifying database which, in one illustrative embodiment, relies on the receipt of "cookies" to determine the identity of the user. As is well known in the art, a cookie is a unique identifier sent by a content provider the first time content is sent to a particular computer that is typically
15 associated with a user. The cookie is stored on the user's machine, and is transmitted by the user's machine with each subsequent request to that particular content provider to identify the user. Thus, the user identifying database associates cookies with a unique user ID number, and with that user's profile. Alternatively, the system may simply ask the user to enter a user name and/or password for identification purposes.

20 Preferably, the system 12 also maintains a log file, which stores a user ID number, the advertisement identification number, a time stamp, and the action performed (e.g., whether the ad was saved in the user's ad-file or not).

The special features of the system of the present invention are implemented, in part, by software programs stored in memory 22 of the central tracking
25 system 12. The software programs are stored in one or more preselected data files and are accessible by the processor 20, the function of which is described in greater detail in connection with FIG. 2.

The system 10 may store the user-selected advertisement in many different ways. In one embodiment, the system 10 maintains a "global" ad-file for each
30 user, which is a data file that stores each advertisement selected by a user at the various

web sites. The global ad-file preferably resides at the tracking system 12.

Alternatively, the system may maintain a number of "local" ad-files for each user corresponding to the various web sites visited by the user. The local ad-files may reside at each web site, or alternatively at the tracking system 12, but preferably in a manner
5 transparent to the user.

Thus, in one illustrative embodiment of the invention, an advertiser may provide a conventional advertising banner (i.e., graphics) to the operator of the ad-file tracking system 12, along with an embedded URL of the advertiser. The operator of the tracking system 12 stores the banner and embedded URL, and provides an ad-file URL
10 to the advertiser, which the advertiser provides to the web site operator, along with the banner. The web site operator then links the ad-file URL with the advertisement in the association table in the database. Thus, when a user clicks on the banner, the user is not directed to the advertiser's web site, but instead is directed to the ad server associated with the web site operator. As described above, the ad server then accesses the database
15 to determine the appropriate ad-file URL for that advertisement, and directs the user to that URL, as is described in greater detail below.

Alternatively, the operator of a web site 18 may contract with the operator of the system 12, and provide the operator of the system 12 with one or more advertising banners previously received from various advertisers, along with the URL(s)
20 associated with the advertisement(s). The operator of the system 12 stores those banners and URLs, and then provides the web site 18 with various ad-file URLs to link to the corresponding advertisements.

It will be apparent that the invention can be implemented by web site content providers such as publishers and the like, by brand advertisers, either on their
25 own web sites or on content provider web sites, by entities engaged in electronic commerce, and the like.

Referring now to FIG. 2, the operation of the system 10 of the present invention is described in conjunction with the above structural description of the central tracking system 12 and the remote user terminals 16. As illustrated in FIG. 2, the
30 process begins when a user at one of the remote terminals 16 accesses a content

provider's web site 18 via the communication network facility 14. Once communication is established with the web site 18, operation begins at step 50, and the user receives information from the web server at the web site, which includes one or more advertisements, as is conventional. At step 52, the user clicks on one of the
5 advertisements, desiring to be directed to the advertiser's web site. At step 54, the ad server 30 maintained by the web site determines the appropriate ad system URL, with the ad system URL directing the user to the tracking system 12 and also including a unique ad identifier to identify the advertisement selected by the user.

Operation then flows to step 58, and the user is directed to the tracking
10 system 12 via the ad system URL. Also transmitted to the ad system URL is the real URL of the advertisement. At step 60, the system 12 determines whether a cookie is transmitted from the user's terminal. If so, this indicates that the user has already visited the tracking system 12, operation proceeds to step 62, and the system retrieves the user's profile. If, on the other hand, the user's terminal 16 does not transmit a
15 cookie, then operation flows to step 64 and the user is registered as either a first-time visitor or as an existing user using a different terminal.

Once the user's profile is retrieved or created, operation flows to step 66, and the system 12 determines, from the user's profile, whether the user's preference is to save every advertisement he or she selects. If the user preference is to save every ad,
20 the user's indication to save the ad and/or the advertisement graphics themselves are saved in the user's ad-file at step 68, along with the advertiser's URL, for future retrieval. As described above, the advertisement can be stored in a global ad-file, a local ad-file, or both. Alternatively, each advertisement may be saved in one central database at the system 12, with a user's ad-file simply storing a link to that
25 advertisement. In that manner, storage space is optimized. Optionally, the user is also notified that the advertisement (or a link to the advertisement) has been saved. The user may then be directed back to the original web site which presented the advertisement to the user. Alternatively, the user may be directed to the advertiser's web site after the advertisement has been saved by using the advertiser's URL transmitted by the ad server
30 30.

If, at step 66, the automatic saving of each advertisement is not the user's preference, operation instead proceeds to step 70, and the system 12 determines whether the user's preference is to be asked whether he or she wishes to go to the advertiser's web site. If the user's preference is to be asked whether he or she wishes to go to the advertiser's web site, operation flows to step 72, and the system 12 queries the user whether he or she wishes to be directed to the advertiser's web site. If the user wishes to be directed to the advertiser's web site, operation proceeds to step 74, and the system stores the advertisement (or the link to it) in the user's ad-file. Operation then proceeds to step 76, and the user is directed to the advertiser's web site.

If, at step 70, the user's preference is not the "always ask" option, operation proceeds instead to step 78, and the system 12 determines whether the user's preference is to always go to the advertiser's web site. If the user's preference is to always go to the advertiser's web site, operation proceeds to step 74 and the advertisement (or the link to it) is stored in the user's ad-file. Operation then proceeds to step 76 and the user is directed to the advertiser's web site.

If at step 78, it is determined that the user's preference is to not always go to the advertiser's web site, operation proceeds to step 80, and the user is redirected back to the publisher's site.

Thus, a user will create a file of stored advertisements or links to advertisements (the user's ad-file), which is maintained at the tracking system 12 in memory 22, to which the user may return at some later time. In addition, advertisers may have promotions or new advertisements, and will provide those promotions and/or new advertisements to the operator of the tracking system 12. Then, when the user accesses the system 12, the system retrieves the user's ad-file and presents the advertisements to the user. In addition, if any of the promotions or new advertisements relate to the same goods and/or services as those advertisements stored in the user's ad-file, the system may either present the promotions or new advertisement(s) to the user, or inform the user that promotions or new advertisements exist and ask the user whether he or she wishes to be presented with those promotions or advertisement(s). In this manner, users may be presented with only certain advertisements based upon the user's

profile.

Alternatively, an advertiser may generate a new advertisement which is intended to be a substitute for an old advertisement, or may provide additional information to supplement an old advertisement. Thus, the new advertisement (or
5 supplemental information) may be stored in the ad-files of the users who selected the old advertisement, with the old advertisement being removed from those ad-files in the case of a new advertisement. In addition, advertisers may have ad schedules, with certain advertisements being stored in the various ad-files depending on the time of year.

When an advertisement is retrieved by the tracking system 12, it may be
10 provided to the user in a number of ways. In one preferred embodiment, as is described above, the advertisement is transmitted to the user via the communication network facility 14. Alternatively, the advertisement may be transmitted as an electronic mail ("email") transmission, a facsimile transmission, or any other suitable transmission.

From the foregoing, it will be apparent that the system 10 of the present
15 invention provides a convenient, efficient system for storing and later presenting information, for example, selected advertisements, to a user of a bidirectional communication system. In addition, the system stores selected advertisements for a user which the user may access at some later time to read.

The system 12 may generate revenue for the system operator in the form
20 of any one or more of advertising fees, registration fees, and the like.

While forms of the invention have been described, it will be apparent to those skilled in the art that various modifications and improvements may be made without departing from the spirit and scope of the invention. As such, it is not intended that the invention be limited to the illustrative embodiments set forth herein.

25

WHAT IS CLAIMED IS:

1 1. A method for storing and selectively presenting selected information to a
2 user of a bidirectional communication system, comprising the steps of:
3 storing data relating to the information in a preselected file, in response to the
4 selection of the information by the user; and
5 subsequently presenting the data to the user in response to a user request.

1 2. The method of claim 1, further including the step of redirecting the user
2 to a central tracking system in response to the selection of particular information by the
3 user.

1 3. The method of claim 1, wherein the step of storing data comprises storing
2 the data in a global file at a central tracking system.

1 4. The method of claim 1, wherein the step of storing data comprises storing
2 the data in a selected local file for the user.

1 5. The method of claim 4, wherein the local file is maintained at a central
2 tracking system.

1 6. The method of claim 1, wherein the step of storing data comprises storing
2 at least one of graphical data, text data, audio, video and identification data.

1 7. The method of claim 2, wherein the step of storing data comprises storing
2 data corresponding to each piece of information selected by the user.

1 8. The method of claim 2, wherein the step of storing data comprises
2 querying the user whether to store data for each piece of information selected by the
3 user, and storing data corresponding to the pieces of information that the user designates

4 for storage.

1 9. The method of claim 1, wherein the step of presenting comprises
2 presenting the data along with additional data relating to the selected information.

1 10. The method of claim 1, wherein the information comprises at least one
2 advertisement, and further including the step of directing the user to a URL of the
3 selected advertisement after storing the data relating to the selected advertisement.

1 11. The method of claim 1, further including the steps of directing the user to
2 a central tracking system, and creating a profile for the user and registering the user if
3 the user is a new user.

1 12. The method of claim 1, further including the steps of directing the user to
2 a central tracking system, determining if the user is a registered user, retrieving the
3 user's profile if the user is a registered user, and presenting additional information based
4 on said profile.

1 13. The method of claim 1, wherein the step of storing comprises storing, in
2 addition to the data relating to the selected information, additional data in the preselected
3 file, and presenting the additional data to the user in response to the user request.

1 14. The method of claim 1, wherein the step of storing comprises storing, in
2 the preselected file, a link to a selected piece of information.

1 15. The method of claim 1, further including the step of creating a
2 corresponding file for each site visited by a user, and wherein the step of storing
3 comprises storing the data in the corresponding file.

1 16. The method of claim 1, further including the steps of maintaining a

2 database to link selected pieces of information to a central tracking system, and directing
3 a user to the central tracking system when the user selects one or more of the selected
4 pieces of information.

1 17. The method of claim 1, further including the steps of accessing a server
2 when a user selects a piece of information, and accessing, at the server, a database to
3 determine an appropriate destination based on the selected information, and routing the
4 user to the destination.

1 18. The method of claim 1, further including the steps of maintaining, at a
2 central tracking system, a database to link unique pieces of information with a URL for
3 the information.

1 19. The method of claim 1, further including the step of identifying the user
2 via a user identification database and information transmitted by the user's terminal.

1 20. The method of claim 1, wherein the information comprises
2 advertisements, and wherein the step of storing data comprises the steps of storing the
3 advertisement in a centralized database, and storing identifying data in a user file.

1 21. A system for storing and selectively presenting selected information to a
2 user of a bidirectional communication system, comprising:
3 a central computer system comprising an interface to communicate with remote
4 users and content providers over a communications network facility; and
5 a processor programmed to create at least one file for each user, and to be
6 responsive to selection by a user of a particular piece of information to store data
7 relating to the piece of information in the user's file, the processor being further
8 programmed to present to each user, upon request, the data stored in the user's file.

1 22. The system of claim 21 for use over a computer network, wherein the

2 interface is designed to communicate over the computer network.

1 23. The system of claim 21, wherein the processor is programmed to create a
2 global file for each user, and to store the data in the global file for the user.

1 24. The system of claim 21, wherein the processor is programmed to create a
2 plurality of local files for each user, and to store the data in the corresponding local file
3 for the user.

1 25. The system of claim 21, wherein the processor is programmed to store at
2 least one of graphical data, text data, video, audio and identification data.

1 26. The system of claim 21, wherein the processor is programmed to retrieve
2 a user's profile, and to store data in the user's file based on the user's profile.

1 27. The system of claim 21, wherein the processor is programmed to present
2 the stored data to the user, along with additional data relating to the selected
3 information.

1 28. The system of claim 21, wherein the processor is programmed to
2 determine if the user is a registered user, and retrieving the user's profile if the user is a
3 registered user.

1 29. The system of claim 21, wherein the processor is programmed to create a
2 corresponding file for each site visited by a user, and to store the data in the
3 corresponding file.

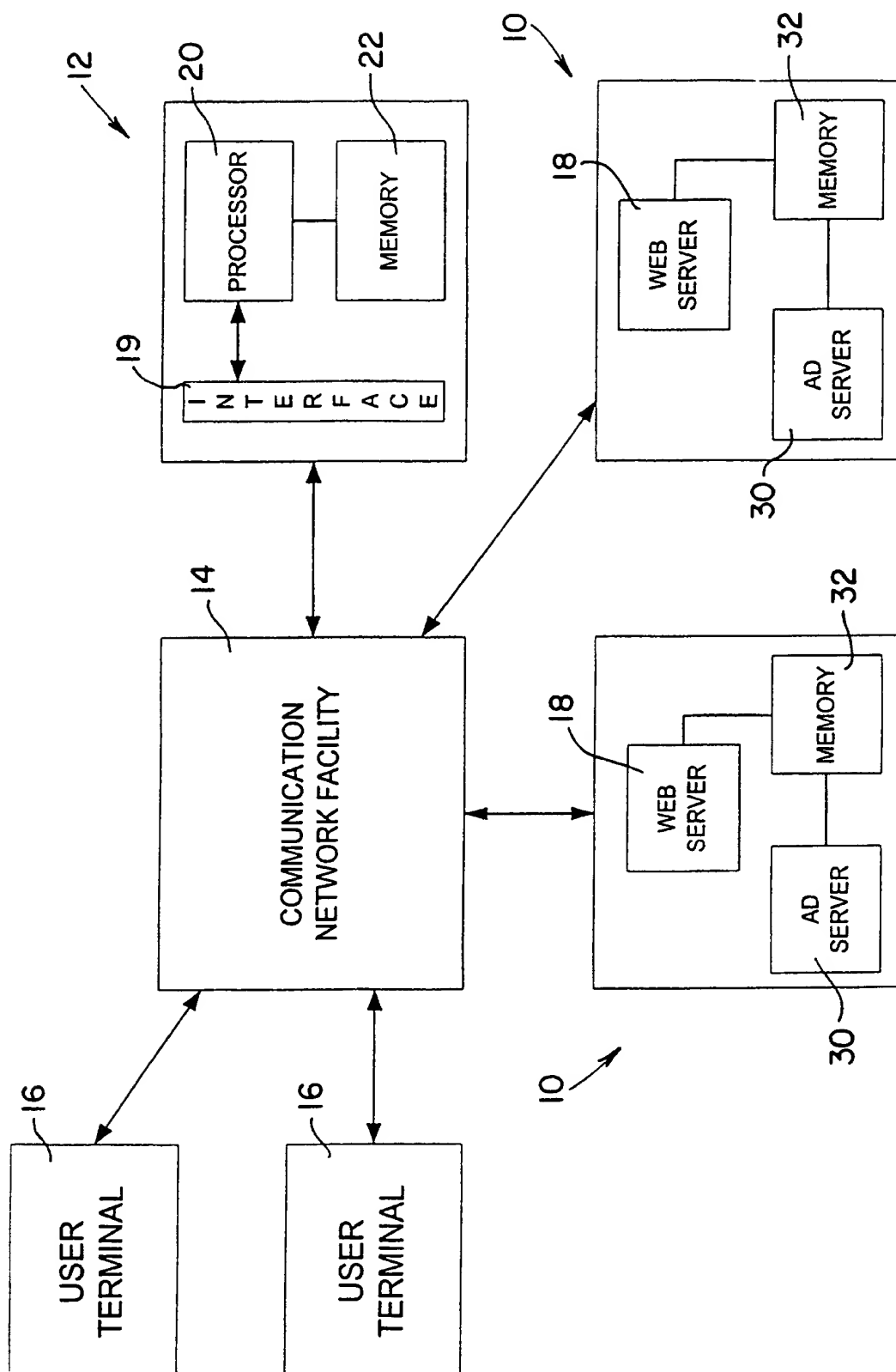
1 30. The system of claim 21, further including a server that maintains a
2 database to determine an appropriate destination for a user based on the selected
3 information, and programmed to route the user to the destination.

1 31. The system of claim 21, wherein the selected information comprises at
2 least one advertisement, and wherein the processor is responsive to selection by a user of
3 a particular advertisement to store data relating to the advertisement in the user's file.

1 32. The system of claim 31 wherein the processor is programmed to direct the
2 user to a URL of the selected advertisement.

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FIG. 1



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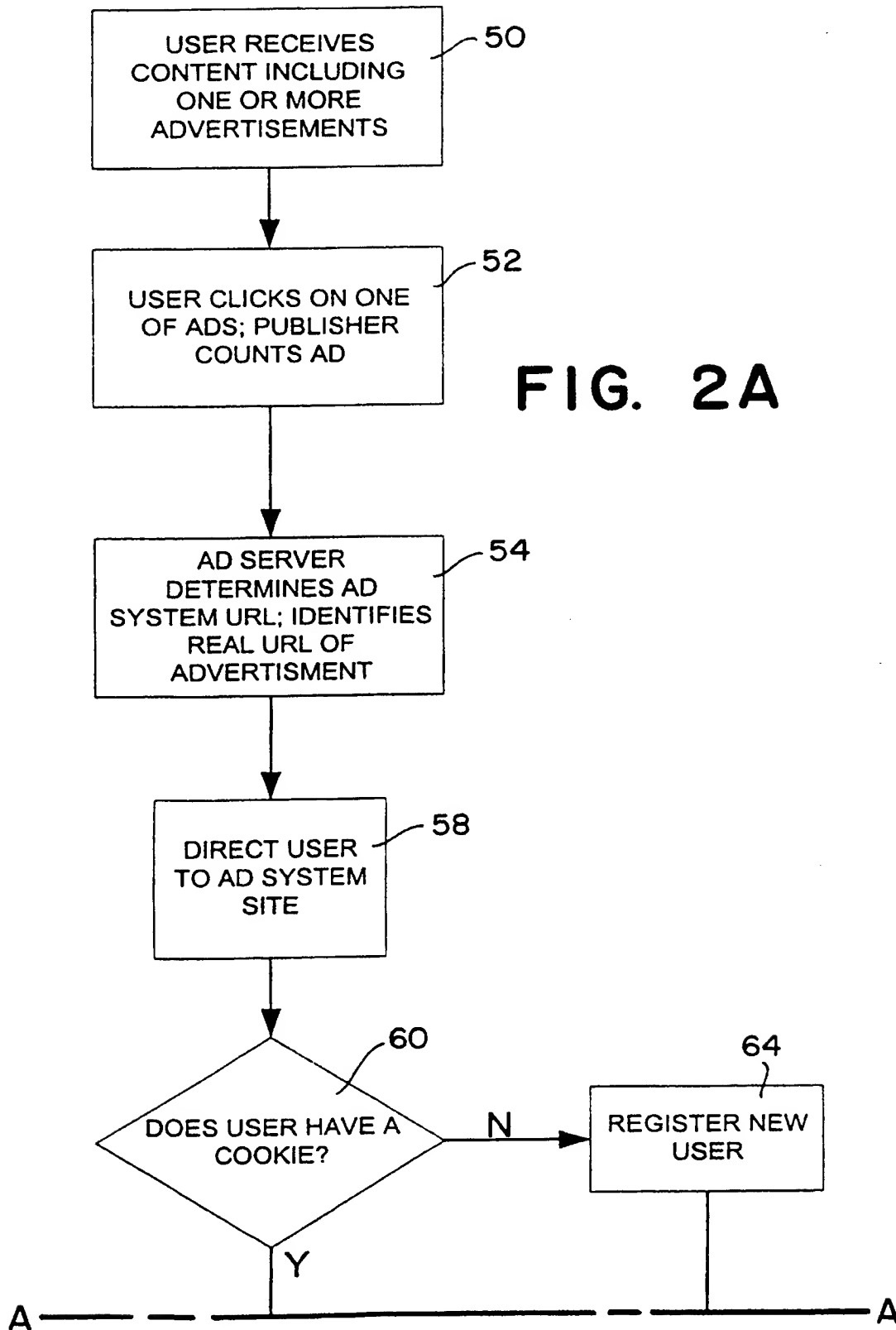
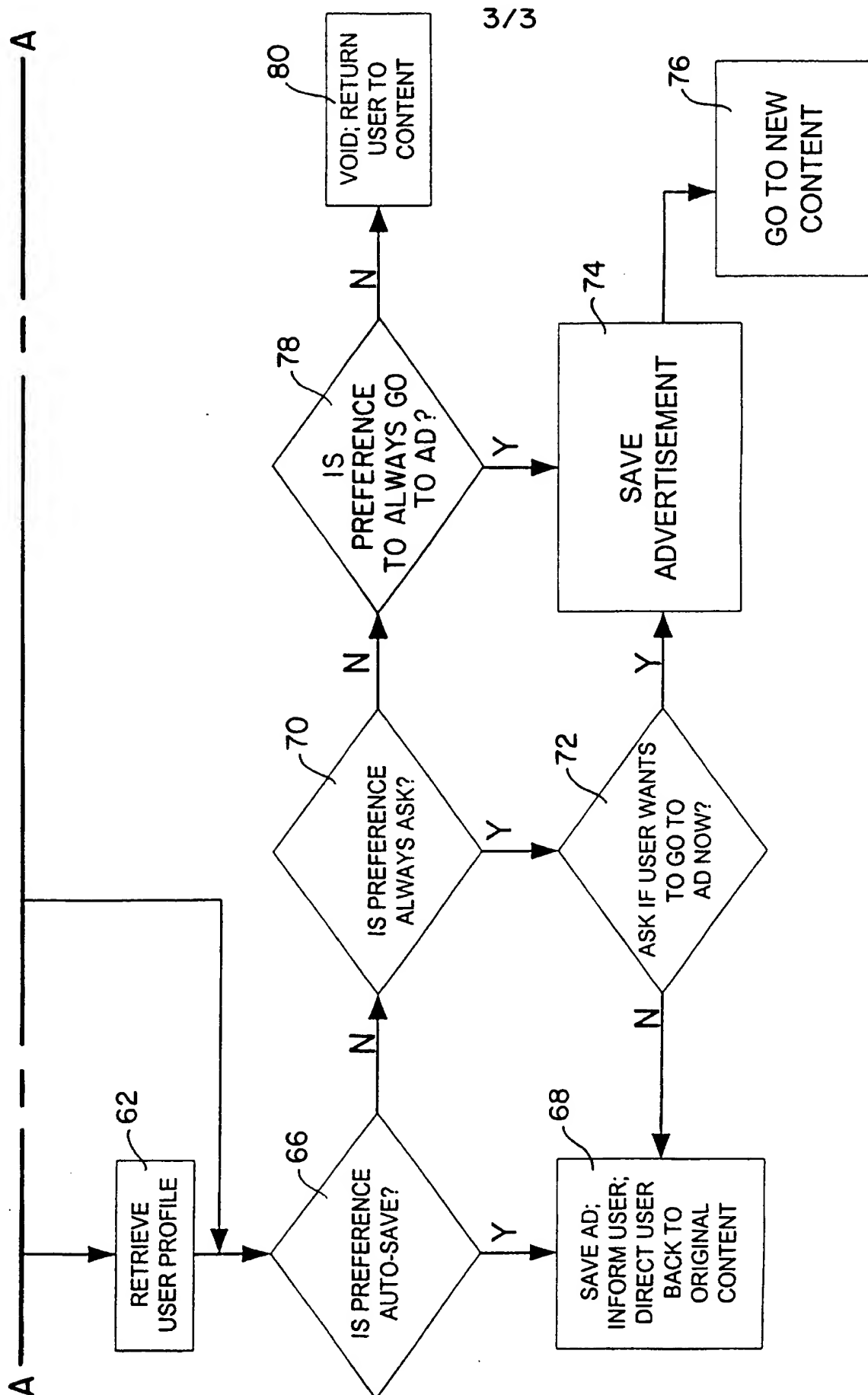


FIG. 2B



INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/08281

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06F 17/60

US CL : 705/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 705/14, 28, 29

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

East Service (USPatfiles, JPO, EPO and Derwent files)(see attached) and DIALOG (financial and business databases)(see attached)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,855,007 A (JOVICIC et al) 29 December 1998, Fig. 3, Fig. 6, col. 2, lines 39-46, col. 7, lines 1-45, lines 56-64, col. 8, lines 1-23, col. 9, lines 38-65 and col. 10, lines 1-7.	1-9, 11, 12, 19, 21-29 and 31
X	US 5,848,396 A (GERACE) 08 December 1998, col. 4, lines 1-11, lines 21-47 col. 6, lines 13-22, lines 46-57, col. 9, lines 31-39, col. 10, lines 33-39, col. 13, lines 37-46, lines 61-67 and col. 14, lines 31-36.	10, 13-18, 20, and 30
A	US 5,809,242 A (SHAW et al) 15 September 1998, see abstract.	1-31
A, P	US 6,029,195 A (HERZ) 22 February 2000, see abstract.	1-31

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"A" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 26 MAY 2000	Date of mailing of the international search report 05 JUL 2000
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer EMANUEL TODD VOELTZ <i>For Signature</i> Telephone No. (703) 305-9714

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/08281

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 409034902 A (SATO et al) 07 February 1997, see abstract.	1-31
A	US 5,287,181 A (HOLMAN) 15 February 1994, see abstract.	1-31
A	REICHARD, KEVIN. Cache as cache can. UNIX Review's performance Computing. September 1998. Vol. 16, No. 10. pages 55-57.	1-31
A	SULLIVAN, EAMONN. Lessening Internet speed penalties. (Intersights)(PC Week Network). PC Week. 24 June 1996. Vol. 13. No. 25. page N3.	1-31
A	GIOBBE, DOROTHY. California daily developing cable classified service: Orange County Register, in partnership with the Interactive Channel, hopes to roll out the American Classified Network in 1995. Editor & Publisher. 18 June 1994. Vol. 127. No. 25. page 26.	1-31

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